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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,008	08/24/2001	Clark I. Bright	56760US008	3576
7590	06/02/2004		EXAMINER	
Office of Intellectual Counsel 3M Innovative Properties Company PO Box 33427 St. Paul, MN 55133-3427			JACKSON, MONIQUE R	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/939,008	BRIGHT, CLARK I.
	Examiner Monique R Jackson	Art Unit 1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 February 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 39,40,50,73-76 and 79-146 is/are pending in the application.
 4a) Of the above claim(s) 39,40,50,73-76,102,103,109 and 115-145 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 79-101,104-108,110-114 and 146 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 2/27/04 has been entered. New claim 146 has been added. Claims 39, 40, 50, 73-76, and 79-146 are pending in the application. Claims 39, 40, 50, 73-76, 102, 103, 109 and 115-145 have been withdrawn.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Priority

3. The Examiner notes that the instant application is a division of 09/419,870 filed October 18, 1999, which claims priority to provisional application 60/106,871 filed November 2, 1998. However, upon a review of the provisional application, it was determined that the instant claims (*and portions of the specification*) are not fully supported by the provisional application and hence the Applicant is not afforded the effective date of the provisional application. The effective date of the instant application is therefore the actual filing date of the parent application, October 18, 1999.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 79-90, 92-97, 104-108, 110-114, are 146 rejected under 35 U.S.C. 102(e) as being anticipated by Affinito (USPN 6,268,695.) Affinito teaches an environmental barrier material

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for an organic light emitting device wherein the barrier has a foundation and a cover, both of which have a top of three layers of (a) first polymer layer, (b) a ceramic layer, and (c) a second polymer layer, wherein the foundation and/or the cover may have at least one set of intermediate barrier each having an intermediate polymer layer with an intermediate ceramic layer thereon, wherein the OLED is constructed upon a flexible polymer substrate with the cover layer placed over the OLED and the foundation placed upon the substrate between the substrate and the OLED (Abstract; Col. 3,lines 27-40; Figure 2.) The ceramic layer(s) are preferably formed by vacuum deposition of a metal oxide, metal nitride, metal carbide, and are preferably substantially transparent including indium tin oxide (*amorphous, conductive oxide as instantly claimed*), indium oxide, tin oxide, aluminum nitride or silicon nitride, silicon oxide or aluminum oxide (*dielectric oxides*) (Col. 3, lines 27-65.) The polymer layers are the same as the instantly claimed layers formed by vacuum deposition of an acrylic or methacrylic resin by depositing the monomer and then curing the layer such as PML layers (Col. 1; Col. 3-4.) Affinito specifically teaches an example comprising the following structure: 150 substrate/142 polymer/144 ceramic/132 polymer/134 ceramic/136 polymer/160 OLED/142 polymer/144 ceramic/132 polymer/134 ceramic/136 polymer which reads upon the instantly claimed invention including the limitations with respect to a barrier layer on both sides of the electronic device, an acrylic hardcoat, a barrier between the substrate or device and a layer of organic polymer, an amorphous layer, dielectric polymer layer is crosslinked, barrier between substrate and device, organic polymer layer between substrate or device and barrier or over barrier, a barrier with one or more pairs of organic dielectric polymer and transparent conductive oxide (Figure 2, Col. 2-3.) Affinito further teaches that the invention provides a flexible, transparent, environmental barrier

to encapsulate LEP devices such as OLED or electroluminescent device that permits viewing while preventing ingress of oxygen and water vapor from the environment (Col. 2, lines 1-42; Col. 4, lines 7-21.) With respect to Claims 110-111, the Examiner takes the position that the oxygen permeability and water vapor permeability of the invention taught by Affinito would inherently be within the instantly claimed ranges given that the materials are the same as the instant invention and the layers are produced by the same method as the instant invention.

Claim Rejections - 35 USC § 103

6. Claims 91, 98, 99 and 101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Affinito in view of Nilsson et al (US 2003/0184222 A1.) The teachings of Affinito are discussed above. Though Affinito teaches that the ceramic layer may be formed by transparent conductive or dielectric oxides and nitrides and combinations thereof, Affinito does not specifically teach that the ceramic layer is formed by a three layer configuration as in instant Claim 91 or an additional dielectric oxide/nitride layer in combination with the conductive oxide layers as in instant Claims 98-99 and 101. However, given that Affinito teach that the ceramic layer(s) may be produced by any of these materials or combinations thereof, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any combination of these materials or any combination of layers of these materials in producing the invention taught by Affinito given the reasonable expectation of success. Further, though the transparent metal oxide and/or metal nitride layers taught by Affinito read upon the general term “transparent metal layers” as in instant Claim 101, Affinito does not teach the incorporation of a transparent metal layer or metallic film other than as an oxide, nitride, carbide or oxynitride. However, Nilsson et al teach that a transparent barrier film for encapsulating and protecting polymer-based electronic

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devices such as polymer-based light emitting devices are preferably provided with a thin nonreactive metal layer such as aluminum in addition to one or more nitride layers to provide improved barrier properties to the protective film and hence, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate a transparent metal layer into the barrier composite taught by Affinito to provide improved barrier properties.

Response to Arguments

7. Applicant's arguments filed 2/27/04 have been considered but are moot in view of the new ground(s) of rejection.
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 571-272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monique R. Jackson
Primary Examiner
Technology Center 1700
May 28, 2004